

REMARKS

Summary of Claim Amendments

Claims 1, 8, and 20 have been canceled. Claim 19 has been amended to obviate the rejection under 35 U.S.C. §101, and claims 2, 3, 6, and 7 have been amended to depend from claim 19. Upon entry of these amendments, claims 2-7, 19, and 21 will be pending. No new matter or new issues have been raised by these amendments.

Rejection under 35 U.S.C. §101

In the Final Rejection, claims 1-8 and 19-21 were finally rejected under 35 U.S.C. §101 as allegedly failing to set forth patentable subject matter. In particular, the Examiner alleged that the claims do not provide a “tangible result” since the outcome of the “determining step” allegedly is not used in a disclosed “practical application” or “made available in such a manner that its usefulness in a disclosed practical application can be realized.” Claim 1 has been canceled, and claim 19 has been amended to obviate this rejection by reciting the further step of “obtaining the system’s response to said desired frequency dependent excitation.” In view of these amendments, this rejection is traversed.

Applicant submits that the claimed method accomplishes the practical application of synthesizing pulses so as to generate the pulse envelope for a given excitation profile and applying the desired frequency dependent excitation to the system to generate the system’s response thereto. For example, in the case of a magnetic resonance imaging system, the system’s response is an image, while in the case of a quantum computer, the system’s response is a computation. Those skilled in the art drive such systems by applying pulse sequences that cause such machines to generate radiofrequency fields specified by the pulse sequences. The generated radiofrequency fields desirably correspond to the given excitation profile and lead to desirable images and/or computation results in accordance with the desired “practical application.” The generated pulses are thus clearly “useful, concrete, and tangible” in that they may be applied to the system to cause an observable and/or measurable result that accomplishes the practical result of generating an image or producing a computation based on a given selective excitation profile.

Thus, the invention as now claimed is a method or process and thus falls within an enumerated statutory category under 35 U.S.C. §101. Moreover, the claimed method creates

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a tangible system response that is available to be seen and/or used by the operator. If the Examiner disagrees with this assessment, she is strongly encouraged to contact Applicant's undersigned representative to discuss any claim amendments that will overcome the Examiner's objections. Withdrawal of the rejection of claims 1-8 and 19-21 under 35 U.S.C. §101 is respectfully solicited.

Allowable Subject Matter

Applicant appreciates the Examiner's indication that the subject matter of claims 1-8 and 19-21 is allowable over the prior art. The above amendments and comments are believed to overcome the rejection under 35 U.S.C. §101 so that the remaining claims are now believed to be in condition for allowance.

Conclusions

Entry of the above amendments is appropriate to facilitate allowance of the present application without introducing any new issues for the Examiner's consideration. Entry of the above amendments and issuance of a Notice of Allowability are thus respectfully solicited.

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